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09/177,251	10/22/1998	ERIC C. ANDERSON	1062P/P180	2859

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EXAMINER

HARRIS, TIA M

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 05/07/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

10

Office Action Summary

Application No.

09/177,251

Applicant(s)

ANDERSON, ERIC C.

Examiner

Tia M Harris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-22 and 28-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-22 and 28-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 26 February 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/26/03 has been entered.

The applicant's amendments to claims 1, 7 and 10 have overcome the objections to the claims. Therefore, the objections are withdrawn.

Drawings

2. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 2/26/03 has been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Claim Objections

3. Claims 9 and 22 are objected to because of the following informalities: step (b) states "the at least one criteria" but three criteria have been claimed in earlier steps of the claims. Examiner suggests removing the term "the" from this phrase. Also, "the at least one object" should be changed to either "the second object" since two objects have been specified in the claims or "at least one object" (lines 23-27, 29-30, 32). Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 29, 31, 33, 35 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what applicant means regard "remaining settings".

Response to Arguments

6. Applicant's arguments filed 2/26/03 have been fully considered but they are not persuasive.

The applicant argues that Omata (6067114) in view of Ikemori (4826301) fail to teach or suggest determining whether the focus zone can be shifted so that at least one object is sufficiently out of focus, and shifting the focus zone if it is determined that the focus zone can be shifted so that at least one object is sufficiently out of focus (Page 12 of Remarks). The examiner respectfully disagrees with this assessment of the references, and maintains the position as stated in the previous Office Action dated 11/8/02. As previously stated, the combined invention of Omata and Ikemori discloses a method of capturing an image using an image capture device, the image capable of including a plurality of objects, each of the plurality of objects being a corresponding distance from the imaging device. Ikemori further discloses shifting the focus zone so that at least one object is out of focus if at least one of the plurality of objects is not out of focus (Col 11, Lines 41-60). In order to be able to shift the focus zone as taught by Ikemori, it is inherent that the focus be determined to be shiftable. Therefore, the method comprises the step of determining that the focus zone can be shifted so that at least one object is out of focus if at least one object is not out of focus.

Applicant further argues that Omata and Ikemori also fail to teach or suggest setting the aperture size without shifting the focus zone after the focus zone has been shifted if it is

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determined that the focus zone can be shifted so that the at least one object is out of focus, and adjusting the aperture size to shorten the focus zone if it is determined that shifting the focus zone alone is not sufficient for the at least one object to be out of focus (Page 12 of Remarks). However, Examiner does not rely on Omata and Ikemori to teach these features, but relies on the teaching disclosed in Wakabayashi (4825235).

Applicant further argues that Wakabayashi does not teach or suggest setting the aperture size without shifting the focus zone after the focus zone has been shifted if it is determined that the focus zone can be shifted so that the at least one object is out of focus, and adjusting the aperture size to shorten the focus zone if it is determined that shifting the focus zone alone is not sufficient for the at least one object to be out of focus (Page 16 of Remarks). Examiner respectfully disagrees with this assessment of the reference. Examiner relies on the combination of Omata, Ikemori and Wakabayashi to teach these features, not Wakabayashi alone. The combination of Omata and Ikemori teach, as discussed above, determining whether the focus zone can be shifted so that the at least one object is out of focus and shifting the focus zone accordingly. If shifting the focus zone alone is not sufficient for the at least one object to be out of focus, one skilled in the art would know to incorporate the features of Wakabayashi, which teach setting the aperture size after the soft focus operation has been performed and adjusting the aperture size to shorten the focus zone to *"improve the soft-tone effect"*. (Wakabayashi, Col 18, Lines 38-48).

Applicant further argues that Nagahata (5825016) does not teach or suggest adjusting the aperture size without shifting the focus zone if the desired soft focus can be achieved with a focus zone shift alone, adjusting the aperture size to shorten the focus zone if it is determined that shifting the focus zone alone is not sufficient for the at least one object to be out of focus, and determining whether the focus zone can be shifted a sufficient amount to ensure that some

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objects are out of focus and shifting the focus zone if it is determined that the focus zone can be so shifted (Page 17 of Remarks). However, Examiner does not rely on Nagahata to teach these features, but relies on the combined teaching of Omata, Ikemori, and Wakabayashi as discussed above.

Applicant further argues that Omata, Ikemori, Wakabayashi and Nagahata do not teach setting the focus zone location based on the aperture size if the aperture size has been adjusted to shorten the focus zone if it is determined that the focus zone cannot be shifted so that the at least one object is out of focus, and setting remaining settings without shifting the focus zone or changing the aperture size if the aperture size and focus zone have been set so that the at least one object is out of focus. Examiner respectfully disagrees with this assessment of the references. Examiner relies on the combination of the references to show the knowledge of one skilled in the art to use a combination of focus control and aperture control to create a desired soft focus effect. Such a procedure is old and very well known in the art.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2, 4-7, 10-11 13-21, 28-29, and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omata in view of Ikemori and Wakabayashi.

(Claims 1, 7, 10, 16-17, 28, 32) Omata discloses a method for capturing an image using an image capture device (Col 3, Lines 9-20), the image capable of including a plurality of objects (see Fig 5), each of the plurality of objects being a corresponding distance from the imaging device (Col 5, Lines 8-10, 16-17), the image being associated with a focus zone (Col 3,

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Lines 60-62; Col 5, Lines 18-21), the method comprising the steps of determining if the image matches at least one criteria by determining the corresponding distance for each of the plurality of objects (Col 5, Lines 8-10, 18-21), determining whether at least one of the plurality of objects is out of focus if the image matches the at least one criteria and shifting the focus zone by focusing the image on a selected main object (Col 4, Lines 12-15). Omata does not specifically disclose determining whether the focus zone can be shifted so that the at least one object is out of focus if the at least one object is not out of focus and shifting the focus zone so that the at least one object is out of focus if at least one of the plurality of subjects is not out of focus, and if it is determined that the focus zone can be shifted so that the at least one object is out of focus, setting an aperture size without shifting the focus zone after the focus zone has been shifted if it is determined that the focus zone can be shifted so that the at least one object is out of focus, and adjusting the aperture size to shorten the focus zone if it is determined that shifting the focus zone alone is not sufficient for the at least one object to be out of focus.

Ikemori discloses a photographic system having a soft focus function wherein it is determined that the focus zone can be shifted so that at least one object is out of focus if the object is not out of focus, and shifting the focus zone so at least one object is out of focus (Col 11, Lines 34-60).

Wakabayashi discloses a camera having a soft focus filter, wherein the aperture value is adjusted to improve the soft-tone effect by decreasing the depth of field (Col 18, Lines 38-48).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the method of shifting the focus zone so at least one object is out of focus in the invention disclosed by Omata, as taught by Ikemori, to produce a special effect such as soft focus on the background of the image, which is well known in the art, so the main object (foreground image) would appear sharper. Furthermore, only changing the aperture in

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the Wakabayashi reference creates soft focus effect. When focused on an object of interest, and a soft focus mode is desired, it would have been obvious to one having ordinary skill in the art at the time the invention was made to change only the aperture size in order that the object of interest would remain in focus during the soft focus effect.

(Claims 2, 11) Omata discloses the step of determining if an image matches at least one criterion by determining the corresponding distance for each of the plurality of objects (Col 5, Lines 8-10, 16-20).

(Claims 4, 13) Omata further discloses separating the image into a plurality of zones and analyzing the image in each of the plurality of zones to determine if the image matches the criteria (Col 3, Lines 34-35; Col 5, Lines 5-10, 18-21).

(Claims 5, 14) Omata further discloses determining the amount of each zone and a number of zones, which a particular object occupies (Col 5, Lines 55-67; Col 6, Lines 1-9).

(Claims 6, 15) Omata further discloses the image includes a center and at least one criterion includes a location of a particular object of the plurality of objects being in proximity to the center of the image (Col 4, Lines 25-29).

(Claim 18) Omata also discloses the image capture device is a digital camera (Col 3, Lines 9-17).

(Claim 19, 34) Omata further discloses a computer-readable medium containing a program for capturing an image capable of a plurality of objects, the program includes instructions for controlling the devices that determine if an image matches at least one criterion and determining whether at least one of the plurality of objects is out of focus (Col 3, Lines 54-67). Ikemori inherently discloses program instructions that control determining whether the focus zone can be shifted so that the at least one object is out of focus if the at least one object

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is not out of focus and shifting the focus zone so at least one object is out of focus (Col 11, Lines 34-60).

(Claims 20-21) Refer to rejection of Claims 7 and 17 above respectively.

(Claims 29, 33, 35) It is clear that no further settings are required since the desired soft focus effect has been achieved.

9. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omata in view of Ikemori and Wakabayashi as applied to claim 2 above, and further in view of Nagahata.

The combined invention of Omata, Ikemori and Wakabayashi, discloses a method of capturing an image containing a plurality of objects, as discussed above. Omata and Ikemori disclose focusing on the background or foreground of an image (Omata –Col 1, Lines 24-28; Ikemori – Col 7, Lines 40-41), but do not specifically disclose categorizing the objects of an image as being located in the foreground or background of an image based on corresponding distances.

Nagahata discloses a focus detection device that can be used to capture an image containing a plurality of objects (see Fig 5). It is disclosed that the object, which is farther away from the camera, is considered to be in the background, and the object that is closest to the camera is considered to be in the foreground (Col 7, Lines 60-67; Col 8, Lines 1-5).

It is very well known in the art that an object farther away from a camera is considered to be in the background of an image, and an image closer to the camera would be considered to be in the foreground of the image. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made that since the cameras disclosed by Omata and Ikemori, used in the combined invention of Omata, Ikemori and Wakabayashi, are both capable of capturing an image containing a plurality of objects, they would determine

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whether an object is in the foreground or background of an image based on the distances the objects are from the camera, in the manner taught by Nagahata, so the desired focusing of the objects in the image (such as soft focusing) could be correctly performed.

10. Claims 9, 22, 30-31, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omata, Ikemori, Nagahata and Wakabayashi.

(Claims 9, 22, 30, 36) Omata discloses a method for allowing an image having a center to be captured by an imaging device (Col 3, Lines 9-20, Col 4, Lines 25-29), the image capable of including a plurality of objects (see Fig 5), each of the plurality of objects being a corresponding distance from the imaging device (Col 5, Lines 8-10, 16-17), the image being associated with a focus zone (Col 3, Lines 60-62; Col 5, Lines 18-21), the method comprising the steps of determining if the image matches at least one criteria by determining the corresponding distance for each of the plurality of objects (Col 5, Lines 8-10, 18-21), determining whether at least one of the plurality of objects is out of focus if the image matches the at least one criteria and shifting the focus zone by focusing the image on a selected main object (Col 4, Lines 12-15). Omata further discloses separating the image into a plurality of zones and analyzing the image in each of the plurality of zones to determine if the image matches the criteria (Col 3, Lines 34-35; Col 5, Lines 5-10, 18-21) and determine the amount of each zone and a number of zones, which a particular object occupies (Col 5, Lines 55-67; Col 6, Lines 1-9). Omata also discloses the image includes a center and at least one criterion includes a location of a particular object of the plurality of objects being in proximity to the center of the image (Col 4, Lines 25-29). Omata further discloses a computer-readable medium containing a program for capturing an image capable of a plurality of objects, the program includes instructions for controlling the devices that determine if an image matches at least one criterion, determining whether at least one of the plurality of objects is out of focus, and shifting the focus

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zone so the at least one object is out of focus if at least one of the plurality of subjects is not out of focus (Col 3, Lines 54-67). Omata does not specifically disclose categorizing the objects of an image as being located in the foreground or background of an image based on corresponding distances and shifting the focus zone so at least one object is out of focus, determining whether the focus zone can be shifted so that the at least one object is out of focus if the at least one object is not out of focus and shifting the focus zone so that the at least one object is out of focus if at least one of the plurality of subjects is not out of focus, and if it is determined that the focus zone can be shifted so that the at least one object is out of focus, setting an aperture size without shifting the focus zone after the focus zone has been shifted if it is determined that the focus zone can be shifted so that the at least one object is out of focus, and adjusting the aperture size to shorten the focus zone if it is determined that shifting the focus zone alone is not sufficient for the at least one object to be out of focus.

Nagahata discloses a focus detection device that can be used to capture an image containing a plurality of objects (see Fig 5). It is disclosed that the object, which is farther away from the camera, is considered to be in the background, and the object that is closest to the camera is considered to be in the foreground (Col 7, Lines 60-67; Col 8, Lines 1-5).

Ikemori discloses a photographic system having a soft focus function that discloses program instructions wherein it is determined that the focus zone can be shifted so that at least one object is out of focus if the object is not out of focus, and shifting the focus zone so at least one object is out of focus (Col 11, Lines 34-60).

Wakabayashi discloses a camera having a soft focus filter, wherein the aperture value is adjusted to improve the soft-tone effect by decreasing the depth of field (Col 18, Lines 38-48).

It is very well known in the art that an object farther away from a camera is considered to be in the background of an image, and an image closer to the camera would be considered to

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be in the foreground of the image. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made that since the camera disclosed by Omata is capable of capturing an image containing a plurality of objects, it would determine whether an object is in the foreground or background of an image based on the distances the objects are from the camera, in the manner taught by Nagahata, so the desired focusing of the objects in the image (such as soft focusing) could be correctly performed.

It would have been further obvious to include the method of shifting the focus zone so at least one object is out of focus in the invention disclosed by Omata, as taught by Ikemori, to produce a special effect such as soft focus on the background of the image, which is well known in the art, so the main object (foreground image) would appear sharper. Furthermore, only changing the aperture in the Wakabayashi reference creates soft focus effect. When focused on an object of interest, and a soft focus mode is desired, it would have been obvious to one having ordinary skill in the art at the time the invention was made to change only the aperture size in order that the object of interest would remain in focus during the soft focus effect.

(Claims 31, 37) It is clear that no further settings are required since the desired soft focus effect has been achieved.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tia M Harris whose telephone number is 703-305-4807. The examiner can normally be reached on M-F 8:30 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on 703-308-9644. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-308-6606 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

tmh ~~TMH~~
May 5, 2003



ANDREW CHRISTENSEN
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